Amendments of the Claims:

A detailed listing of all claims in the application is presented below. This listing of claims will replace all prior versions, and listings, of claims in the application. All claims being currently amended are submitted with markings to indicate the changes that have been made relative to immediate prior version of the claims. The changes in any amended claim are being shown by strikethrough (for deleted matter) or underlined (for added matter).

1. (Currently amended). ~~In a~~ A variable cam timing (VCT) system in an internal combustion engine having a ~~crank shaft~~ crankshaft coupled to at least one ~~cam shaft~~ camshaft, the cam timing system comprising:

a phaser having a housing and a rotor, coupled to the crankshaft and at least one camshaft; and

at least one timing ~~gear~~ sprocket associated with the ~~crank shaft~~ crankshaft or ~~a~~ the camshaft ~~cam shaft~~, and coupled to the phaser, the timing sprocket comprising at least two groups of toothlike projections including a first group having a first distance to the center of the sprocket ~~wheel~~, and a second group having a second distance to the center of the sprocket ~~wheel~~, the first distance being different from the second distance.

2.(Currently amended). The ~~timing gear~~ variable cam timing system of claim 1, wherein the ~~at least two groups~~ sprocket further ~~comprising~~ comprises a third group of toothlike projections having a third unique distance to the center of the sprocket ~~wheel~~.

3. (Currently amended). The ~~timing gear~~ variable cam timing system of claim 1, wherein the timing ~~gear~~ sprocket is concentrically coupled to the at least one camshaft ~~cam shaft~~.

4. (Currently amended). The ~~timing gear~~ variable cam timing system of claim 1, wherein the timing ~~gear~~ sprocket is concentrically coupled to a crankshaft ~~crank shaft~~.

5. (Currently amended). The ~~timing gear~~ variable cam timing system of claim 1, wherein the timing ~~gear~~ sprocket is mounted upon a phaser.

6. (Currently amended). The ~~timing gear~~ variable cam timing system of claim 1, wherein the timing ~~gear~~ sprocket is engaging an engine timing chain~~, said timing gear having various toothlike projections and grooves arranged on a wheel rim of a wheel for engaging the links of a timing chain~~.

7. (Currently amended). The ~~timing gear~~ variable cam timing system of claim 1, wherein the timing ~~gear~~ sprocket is engaging an engine timing belt.

8. (Currently Amended). ~~In a~~ A variable cam timing (VCT) system in an internal combustion engine having a ~~crank shaft~~ crankshaft coupled to at least one camshaft ~~cam shaft~~, the variable cam timing (VCT) system comprising:

a phaser having a housing and a rotor, coupled to the crankshaft and at least one camshaft; and

a resonator positioned upon the at least one camshaft ~~cam shaft~~, the resonator including at least one mass and at least one elastic element;

whereby torsional oscillation of the at least one camshaft ~~cam shaft~~ at a predetermined engine speed range is increased.

9. (Currently amended). The system of claim 8, wherein the at least one mass ~~comprising~~ comprises an annular metal member.

10. (Currently amended). The system of claim 8, wherein the at least one elastic element ~~comprising~~ comprises annular rubber member attached onto the at least one camshaft ~~cam shaft~~.

11. (Currently amended). The system of claim 8, wherein the at least one elastic element ~~comprising~~ comprises at least one spring having a first end attached to the at least one camshaft ~~cam shaft~~ and a second end connected to the at least one mass.

12. (Previously presented). The system of claim 8, wherein the system is a cam torque actuated (CTA), an Oil Pressure Actuated (OPA), or a Torsion Assist (TA) or Torque Assisted phaser system.

13. (Currently amended). The ~~timing gear~~ variable cam timing system of claim 1, wherein the Variable Cam Timing (VCT) system is a cam torque actuated (CTA), an Oil Pressure Actuated (OPA), or a Torsion Assist ~~(TA)or~~ (TA) or Torque Assisted phaser system.